# 2SC1518

### Silicon NPN epitaxial planar type

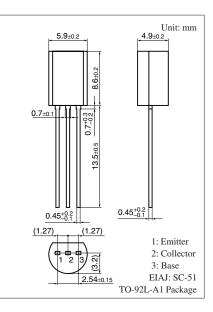
For high-frequency bias oscillation of tape recorders For DC-DC converter

#### Features

- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Satisfactory operation performances and high efficiency with a low-voltage power supply

Parameter	Symbol	Rating	Unit				
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	25	V				
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	20	V				
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	5	V				
Collector current	I <sub>C</sub>	1	А				
Peak collector current	I <sub>CP</sub>	1.5	А				
Collector power dissipation	P <sub>C</sub>	1	W				
Junction temperature	Tj	150	°C				
Storage temperature	T <sub>stg</sub>	-55 to +150	°C				





#### Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

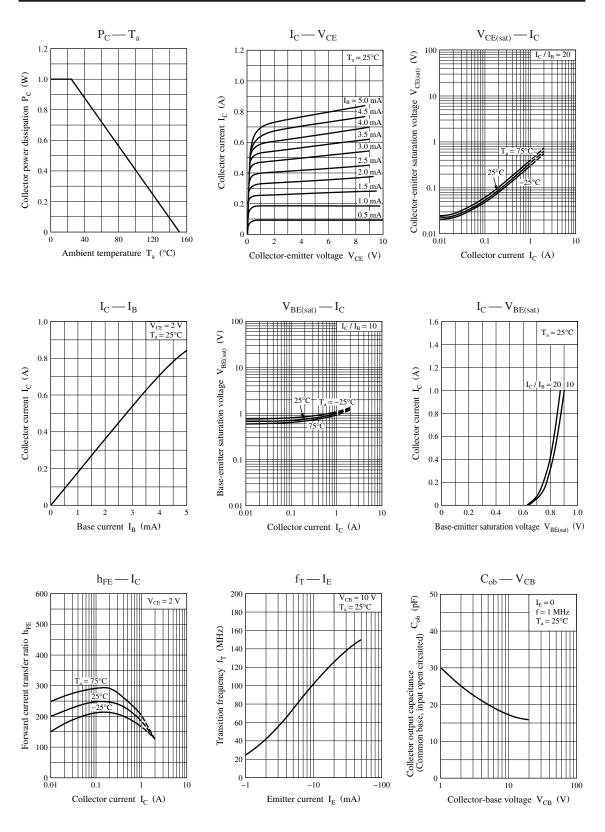
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$	25			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = 1  {\rm mA},  I_{\rm B} = 0$	20			V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	$I_E = 10 \ \mu A, \ I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 25 \text{ V}, I_E = 0$			100	nA
Collector-emitter cutoff current (Base open)	I <sub>CEO</sub>	$V_{CE} = 20 \text{ V}, I_B = 0$			1	μΑ
Forward current transfer ratio	h <sub>FE1</sub> *	$V_{CE} = 2 V, I_C = 500 mA$	90		330	_
	h <sub>FE2</sub>	$V_{CE} = 2 V, I_C = 1 A$	50	100		_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{C} = 1 \text{ A}, I_{B} = 50 \text{ mA}$			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	$I_{\rm C} = 500 \text{ mA}, I_{\rm B} = 50 \text{ mA}$			1.2	V
Transition frequency	f <sub>T</sub>	$V_{CB} = 10 \text{ V}, \text{ I}_{\text{E}} = -50 \text{ mA}, \text{ f} = 200 \text{ MHz}$		150		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		12	20	pF
(Common base, input open circuited)						

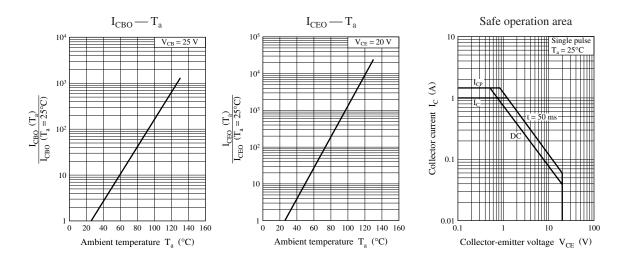
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	Q	R	S
h <sub>FE1</sub>	90 to 155	130 to 220	185 to 330

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